UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,439	09/22/1999	USAMA M. FAYYAD	1018.057US1	4688

7590 11/17/2004	EXAMINER
Microsoft Corporation Patent Group Docketing One Microsoft Way Redmond, WA 98052	COLON, CATHERINE M

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6,7,10-13,15-17,19,20 and 58* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6,7,10-13,15-17,19,20 and 58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 26, 2004 has been entered.

Claims 2-5, 8, 9, 14, 18, 21-57 and 59-64 have been cancelled. Claims 19 and 58 have been amended. Claims 1, 6, 7, 10-13, 15-17, 19, 20 and 58 are now pending in this application.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1, 6, 7, 10-13, 15-17, 19, 20 and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Sheppard (U.S. 6,026,397).

As per claims 1 and 58, Sheppard discloses a method for managing a marketing

campaign and machine-readable medium having instructions stored thereon for

execution by a processor to perform a method, comprising:

providing a data mining engine capable of being trained with training data and

capable thereafter of performing inferences relative to the training data and on

additional data (col. 5, lines 34-39; col. 13, lines 14-26; The system provides a neural

clustering function, which is a data mining engine capable of being trained with training

data, to perform inferences associated with the training data.);

providing a user database containing the observed characteristics of each one of

a set of users, the characteristics comprising at least one of: (a) at least one of the

user's attributes, (b) at least one of the user's preferences (col. 4, lines 43-47; col. 5,

line 67-col. 6, line 5; Figure 1; The system analyzes a customer database that includes

demographic and lifestyle data.);

training the data mining engine with a set of training data comprising the user

database by clustering the user database into different segments of users distinguished

by different states of one or more characteristics (col. 8, lines 5-13 and 34-41; col. 12,

lines 21-26; col. 14, lines 9-26; The system uses a rule-based segmentation function to

segment the user database according to various characteristics (i.e., married and non-

married segments).);

inputting to the data mining engine a predetermined set of characteristics

including a predetermined set of user attributes likely to pertain to a product to which the

marketing campaign is directed and, in response thereto, obtaining from the data mining

engine a subset of the users in the database having the highest correlation to the

characteristic by determining which of the segments found during clustering of the user

database has the highest statistical correlation to the predetermined set of

characteristics (col. 14, lines 9-26; col. 18, lines 5-16; The system uses the neural

clustering function to obtain a subset of users having a statistically significant correlation

to a characteristic.);

determining in the data mining engine a set of prevalent attributes of the subset

of users (col. 18, lines 10-16; The neural clustering function determines prevalent

attributes of a subset of users having a statistically significant correlation to a

characteristic.);

defining a target database of users and determining in the data mining engine a

target subset of users in the target database statistically correlated to the set of

prevalent attributes (col. 14, lines 9-26; col. 18, lines 5-16);

conducting a marketing campaign cycle directed at the target subset of users and

observing responses of the target subset of users to the marketing campaign cycle (col.

20, lines 32-50; The system learns from observed behavior from past marketing

campaigns to determine characteristics such as propensity to buy.);

forming a focused group of the target subset of users whose observed response

was a particular type of response (col. 20, lines 32-50; Users from marketing campaigns

can be grouped based on observed responses.);

determining, in the data mining engine, a group of prevalent characteristics of the

focused group of users (col. 20, lines 32-50); and

defining a database to be mined and determining, in the data mining engine, a

new set of users in the database to be mined whose characteristics are statistically

correlated with the group of prevalent characteristics (col. 13, line 65-col. 14, line 26;

col. 18, lines 5-16; The system uses the neural clustering function to obtain a subset of

users having a statistically significant correlation to a characteristic. User subsets can

be refined multiple times.).

As per claim 6, Sheppard discloses the method of claim 1 wherein the target

database comprises the user database with which the data mining engine has been

trained (col. 4, lines 43-47; col. 5, line 67-col. 6, line 5; Figure 1; The system analyzes a

customer database that includes demographic and lifestyle data.).

As per claim 7, Sheppard discloses the method of claim 1 wherein the target

database comprises an additional database not included in the user database, the

additional database defining characteristics of a set of new users (col. 5, line 65-col. 6,

line 14; The system can conduct analyses on multiple databases.).

As per claim 10, Sheppard discloses the method of claim 1 wherein the database

to be mined comprises the user database with which the data mining engine was

trained (col. 4, lines 43-47; col. 5, line 67-col. 6, line 5; Figure 1).

As per claim 11, Sheppard discloses the method of claim 1 wherein the database

to be mined comprises the target database of users (col. 4, lines 43-47; col. 5, line 67-

col. 6, line 5; col. 13, line 65-col. 14, line 7).

As per claim 12, Sheppard discloses the method of claim 1 wherein the database

to be mined comprises a new database not included in either the user database or in

the target user database (col. 5, line 65-col. 6, line 14; col. 13, line 65-col. 14, line 7;

The system can conduct analyses on multiple databases and further, has the ability to

continuously refine user sets, thus creating new user databases with which to analyze.).

As per claim 13, Sheppard discloses the method of claim 1 further comprising:

directing a subsequent marketing campaign cycle to the new set of users (col. 13, line

65-col. 14, line 7; col. 20, lines 32-50).

As per claim 15, Sheppard discloses the method of claim 1 wherein the user

preference corresponds to a prior purchase of a product which is a subject of the

marketing campaign (col. 2, lines 34-38; col. 20, lines 32-50).

As per claim 16, Sheppard discloses the method of claim 1 further comprising:

determining, in the data mining engine, a complete set of statistically prevalent

user attributes of the subset of users (col. 5, lines 33-45; col. 14, lines 9-26; col. 18,

lines 5-16; The system uses the neural clustering function to obtain a subset of users

having a statistically significant correlation to a characteristic.);

for any member of the subset of users having certain attributes which are

undetermined in the user data base, filling in the certain undetermined attributes with

the corresponding ones of the complete set of statistically prevalent user attributes of

the subset of users (col. 16, lines 5-25; col. 17, lines 10-38; The system normalizes the

parameters to offset data that is too dominant or too weak. The system also creates

default values for fields in the database.).

As per claim 17, Sheppard discloses the method of claim 1 further comprising:

for any member of the target subset of users having certain attributes which are

undetermined, filling in the certain undetermined attributes with the corresponding ones

of the set of prevalent user attributes of the subset of users (col. 16, lines 5-25; col. 17,

lines 10-38; The system normalizes the parameters to offset data that is too dominant or

too weak. The system also creates default values for fields in the database.).

As per claim 19, Sheppard discloses the method of claim 1 wherein clustering

comprises: providing with a visualization tool a tabulation of characteristics of each user

group with the probability of each characteristic in the cluster (col. 9, lines 9-11 and 15-

25; col. 10, lines 10-36; Figure 4; The system creates "bins" of segmented users and

creates histograms that provides visual statistical information relating to the bins.);

labeling each cluster with a statistically predominant characteristic thereof in

accordance with the tabulation (col. 10, lines 2-9).

As per claim 20, Sheppard discloses the method of claim 19 wherein the

statistically predominant characteristic of each cluster distinguishes the cluster from the

other clusters (col. 13, lines 18-26; col. 14, lines 9-26; The groups are segmented

according to statistically prevalent characteristics that are different from cluster to

cluster.).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

- Fayyad, Usama. "The KDD process for extracting useful knowledge from

  volumes of data," *Association for Computing Machinery. Communications of the*

  ACM, Nov 1996 [retrieved from Proquest] discusses data mining and clustering

  techniques;

- Filipczak, Bob. "Data-mining: 16 tons and what do you get?" *Training*, Mar 1998

  [retrieved from Proquest] discusses data mining techniques; and

- Lazarus et al. (U.S. 6,134,532) discusses matching entities in databases.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to C. Michelle Colon whose telephone number is 703-605-

4251. The examiner can normally be reached Monday – Friday from 8:30am to

5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq Hafiz, can be reached at 703-305-9643.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-308-

1113.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231
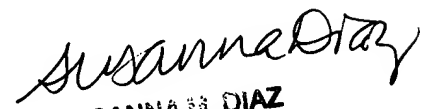
or faxed to:

703-872-9306   [Official Communications; including After Final

communications labeled "Box AF"]

703-746-7202   [For status inquiries, draft communication, labeled

"Proposed" or "Draft"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal

Drive, Arlington, VA 7th floor receptionist.

cmc
November 12, 2004

SUSANNA M. DIAZ
PRIMARY EXAMINER
AU 3623